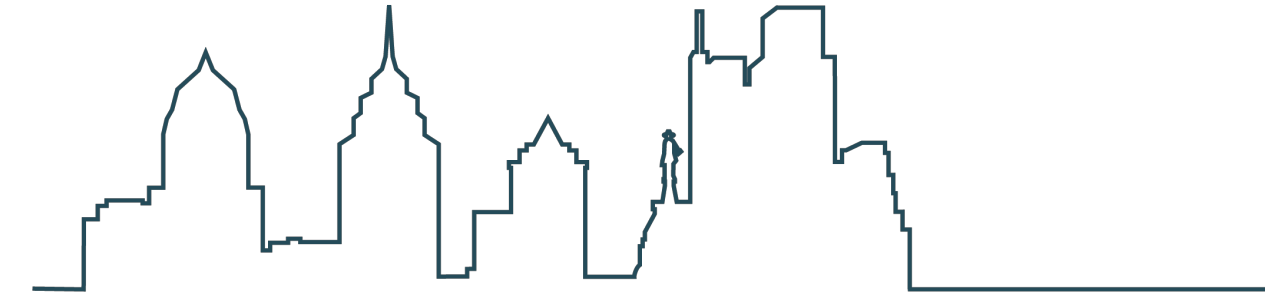
The Economic Case for Increased State Investment in Health and Social Services in Delaware

November 2019
Submitted to

Ability Network of Delaware
100 West 10th Street, Suite 103
Wilmington DE 19801

Submitted by

Econsult Solutions, Inc.
1435 Walnut Street, 4th Floor
Philadelphia PA 19102



ESI ECONSULT SOLUTIONS INC.

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Executive Summary

The Ability Network of Delaware (A.N.D.) and its 39 member agencies provide vital services to members of the disability community, including those with substance use disorders, mental health issues, and developmental and intellectual disabilities. The purpose of this report is to demonstrate the economic, community, and social return generated by State investment in the services provided by A.N.D. and its member agencies. This return derives from the multiplier effect of State dollars invested in such services, from cost savings and quality enhancements via reducing employee turnover, and from the larger financial and reputational costs avoided by adequate funding of those services, as well as from the economic contribution to the State that is made by participants of members' workforce programs.

- Because State dollars leverage Federal dollars and other private and charitable dollars, and because all of those dollars generate a ripple effect throughout the State economy, increases or decreases in State funding to A.N.D. members have a multiplied impact on the State economy, employment base, and tax revenue generation. Specifically, as shown in Table ES.1, a $10 million change in State funding actually produces an impact in the Delaware economy that is over five times greater than the State's investment in funding for services.

Table ES.1 - Impact of State Funding on A.N.D. Members

Increase or Decrease in State Funding to A.N.D. Members	→	Other Funding Dollars Leveraged or Lost	→	Multiplier Effect of Dollars Spent or Lost	→	Economic Activity Supported in Total
+/- $10 million		$13.8 million in federal match + $5.7 million in other funding = $19.5 million leveraged or lost		$29.5 million in direct expenditures + $22.6 million in indirect/ induced impact = $52.1 million annual economic impact		• 460 jobs • $20.0 million in earnings • $1.4 million in State tax revenues

Source: A.N.D (2018), Econsult Solutions (2019)

- Stagnant funding has led to uncompetitive wages for direct support professionals (DSPs), resulting in high turnover, with some workers finding higher-paying work in neighboring states or by leaving the human service sector altogether for jobs in retail, restaurant, or nursing care, as shown by the comparisons in Table ES.2. Conversely, fully funding services to the disability community retains the State's trained workforce, keeps households in Delaware, and injects more economic activity into local communities.

Table ES.2 – Average Annual Wages Paid to Service Providers for the Elderly and Disabled, Compared to Other Competing Job Opportunities

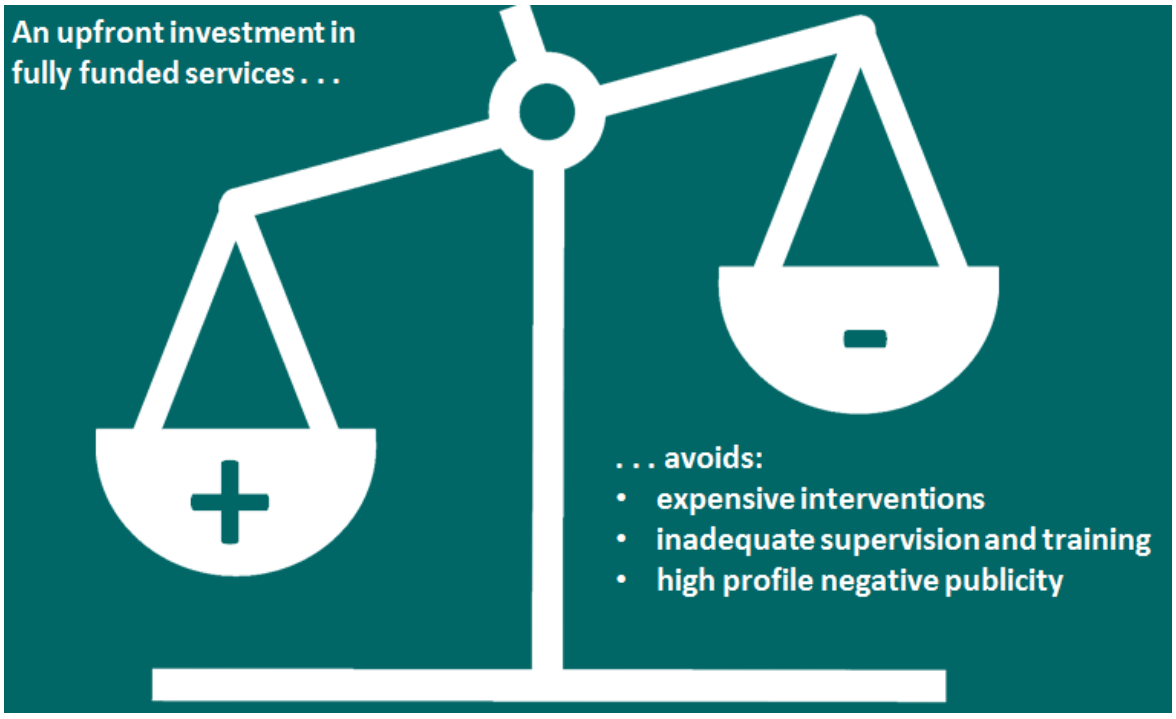
Services for the Elderly & Disabled (DE)	Retail, Restaurant, Child Care (DE)	Home Healthcare, Nursing Care, Assisted Living (DE)	Services for the Elderly & Disabled (MD, NJ, PA)
$16,623	8%-47% more	74%-140% more	38%-47% more

Source: BLS (2018)

- A.N.D. members will be providing services to a growing number of people due to: individuals with disabilities needing care when their families are no longer able to provide it; the increase in the incidence of autism spectrum disorder; and the number of people seeking treatment for substance use disorders (overdose deaths doubled from 2012 to 2017)[1]. Lack of access to proper care will end up costing the State more, in the form of higher social service costs and a loss of confidence among potential residents, workers, employers, and investors (see Figure ES.1).

Figure ES.1 - Reducing Social Services Costs and Risks

Source: Econsult Solutions (2019)



[1] Silverman, P.R.,. Mack, J., Anderson, F.S., Rattay, K.T., "The Delaware Opioid Epidemic", *Delaware Journal of Public Health* (2017). http://www.dhss.delaware.gov/dhss/dph/hsp/files/viscondeoe.pdf

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About Econsult Solutions, Inc.

This report was produced by Econsult Solutions, Inc. ("ESI"). ESI is a Philadelphia-based economic consulting firm that provides businesses and public policy makers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development, planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have outstanding professional and academic credentials, including active positions at the university level, wide experience at the highest levels of the public policy process and extensive consulting experience.

1. Introduction

1.1. Overview

Sufficient and sustainable funding for A.N.D.'s member agencies is necessary in order to continue serving Delawareans affected by Intellectual and Developmental Disabilities (I/DD), as well as mental health and substance use disorders. The timing of this analysis is critical in A.N.D.'s efforts to advocate for new Medicaid rates both for I/DD and behavioral health services in Delaware.

The Medicaid rates for I/DD services were established in 2003, and were to be reviewed every three years and potentially adjusted for inflation. However, adjustments have been far less frequently than proposed, and have not kept pace with inflation. A recent market study conducted by the Delaware Department of Health and Social Services (DHSS) found that as of January 2019, I/DD service providers in Delaware were underfunded by $42 million, and that the pay rates for these providers were well below benchmarked levels. The report found that rates would need to be increased for all types of service providers by an average of 61 percent in order to meet the recommended market rates, with Supported Living providers in need of the highest rate increase of 134 percent[2]. While an additional $4 million in State funds were allocated to I/DD service providers in the Fiscal Year 2020 State budget, it will require another $38 million in additional State funds, annually, to adequately meet the recommended market rates.

Additionally, the rates established for the treatment of mental health and substance use disorders established in 2015 were based on flawed cost assumptions and therefore need to be updated with more accurate cost assumptions. Without additional funding, the ability of behavioral health providers to meet the needs of Delawareans with mental health and substance use disorders will be limited, as the current rates do not sufficiently cover the costs of treatment for these vulnerable populations. This under-funding hurts not only these A.N.D. member agencies and the people they serve, but also the state as a whole. Conversely, discussions about making the necessary adjustments to Medicaid rates would directly benefit service recipients and would also have a broader positive impact on the State economy.

As opioid overdoses continue to climb in Delaware, services for affected populations have become more strained. A 2019 Pew Charitable Trusts report examined the issues facing Delaware's substance use disorder treatment services and recommended that the General Assembly should direct Medicaid resources toward improving treatment, including providing higher rates for care coordination reimbursement, creating a common program assessment tool, allowing for better access to medical treatment, and improving treatment programs in the Department of Corrections[3].

[2] The Division of Developmental Disabilities Services, "2019 Direct Support Professional Rate Rebase Study" (2019).
[3] The Pew Charitable Trusts, "Substance Use Disorder Treatment Policy Recommendations for the State of Delaware" (2019).

1.2. About the Ability Network of Delaware

The Ability Network of Delaware (A.N.D.), formerly the Delaware Association of Rehabilitation Facilities (DelARF), has been committed to serving its members for over three decades.

With the aim of building strength across Delaware's disability community, A.N.D. and its members provide critical support for individuals with disabilities and the individuals that serve them. A.N.D. is a 39-member association with members providing direct services to Delaware's disability community (See Figure 1.1).

A.N.D. member agencies provide services to individuals living with physical and intellectual/developmental disabilities, people recovering from substance use disorders, homeless individuals, veterans, seniors, and at-risk youth.

Figure 1.1 - A.N.D. Member Agencies (State Fiscal Year 2019)



Source: A.N.D. (2018)

1.3. The Need Is Great

The need for a skilled direct support professional workforce to provide consistent, caring, and capable services for individuals with disabilities is great and continually growing. Currently, there are approximately 112,000 persons with disabilities in Delaware, comprising 12 percent of the population. With approximately one out of every eight Delawareans living with a disability, the needs of this community are important and impact all citizens of Delaware for many social and economic reasons.

One out of eight Delawareans is living with a disability, which means that adequate services directly or indirectly impact every household in the state.

This problem is more important now than ever. As the baby boomer population ages, the 65 and older age group will constitute an increasing share of Delaware's population. Within this age group are many caregiving parents of adults with disabilities. This generation of caregivers will eventually need care services for themselves, increasing the need for care providers two-fold. This issue becomes more complicated when considering that for two-thirds of families with an aging caregiver living with a person with a disability, there is no plan in place for what will happen to the person with a disability when the aging caregiver dies or is no longer able to provide care[4]. There are also significant financial challenges facing younger caregiving parents of children with disabilities, who have significantly lower labor force participation rates than the rest of the population.

Socially, everyone knows someone living with a disability, and it is important that these individuals, as well as their families and caregivers, are provided with the necessary tools needed to live fulfilling lives. Economically, individuals with disabilities have much to contribute to Delaware and their abilities should not be overlooked. However, without proper plans in place, Delaware risks losing skilled direct support professionals to other industries or states, family caregivers dropping out of the labor force, and individuals with disabilities never entering the labor force, thus creating a less robust economy and a smaller tax base for Delaware.

The needs of individuals with disabilities in Delaware need to be addressed now. An underfunded, understaffed, and undertrained workforce of direct support professionals only confounds the issues previously stated, leaving Delaware's society and economy in a very vulnerable state.

[4]McKiernan, K., Shaffert, R., Murray, N., "Aging Caregivers and the Adults with I/DD who Live with Them," *thearc.org* (2015). http://www.thearc.org/file/Shaffert.McKiernan.Aging-Caregivers.pdf

1.4. Purpose of Report

Due to the fact that the social and financial challenges facing individuals with disabilities in Delaware are great, adequate funding of services provides a direct benefit to those served by A.N.D. members. These interventions also have larger impacts that benefit the State economy as a whole, and these additional benefits warrant further articulation.

This report looks at four different aspects of economic impact:

- In Section 2, we estimate the overall economic impact of the annual operations of A.N.D.'s member organizations, exploring both how State investments leverage federal dollars and how operating dollars spent support a wide range of economic activity throughout the state.
- In Section 3, we show how uncompetitive wages in this field compare to other job opportunities, and how costly the resulting employee turnover is to operating budgets and service quality.
- In Section 4, we demonstrate that the cost of proactive social service provision is dwarfed by the financial and reputational cost borne within the state when services are underfunded.
- In Section 5, we provide an illustrative example of the economic impact of job training and placement opportunities afforded by set-aside contracts approved by the Commission for Statewide Contracts to Support Employment for Individuals with Disabilities.

1.5. Methodology

This study uses a variety of data sources to make the case for State investment in services for the disability community in Delaware. We met with A.N.D. and its member organizations during their 2017 annual retreat to discuss the issues that face their agencies. We issued a survey to A.N.D. member agencies, then collected their 990s from GuideStar and their publicly available annual reports. In addition, we used data sources such as the U.S. Census, Bureau of Labor Statistics, industry reports, and news articles. All member organization data presented is aggregated. However, we present examples from their publicly available annual reports and 990s.

2. Economic Impact of Delaware Disability Service Providers

2.1. Overview of this Section

In this section, we look at the annual economic impact generated by A.N.D. member agencies. Their main impact on the state is from the vital services they provide, which is the subject of future sections, but it is important to note that they are also a significant source of economic activity, employment, and tax revenue generation within the state. This is all the more important from the standpoint of State investments in A.N.D. member agencies, because those investments are multiplied throughout the state economy in two ways. First, they leverage Federal dollars, which means that increases or decreases in State funding are amplified in terms of actual dollars available within the State. Second, these funds circulate through the state economy, creating spillover effects that support additional economic activity, job creation, and tax revenue generation.

2.2. The Power of Leverage

State dollars are responsible not only for funding the basic operations of service providers in Delaware, but also for leveraging additional funding from non-State sources. Additional State funding for disability services catalyzes Federal funding in the form of matching Medicaid funds. For every dollar spent by the State on I/DD services, $1.38 is matched by Federal funding sources. Thus, when less State money is spent on services, less is allocated from Federal sources; in other words, Federal funding that would otherwise be allocated to the State is essentially left on the table.



Easterseals has been working to support and empower individuals with I/DD through their services and advocacy work for nearly 90 years.

Easterseals, a service provider in A.N.D's network, illustrates the power of leveraging State funds for additional Federal dollars. As shown in Table 2.1, of Easterseals' $41.7 million budget in 2017, $34.8 million came from State and Federal funding sources, constituting 83 percent of Easterseals' total revenue sources. Other funding includes sources such as donations. In 2018, State funding for Easterseals totaled $14.6 million and catalyzed an additional $20.2 million in Federal Medicaid funding. While this example focuses on Easterseals, it is illustrative of A.N.D. member agencies throughout the state.

Table 2.1 – Easterseals Delaware Revenue Sources

Source	Funding ($M)
State Funding	$14.6M
Federal Match	$20.2M
Other Funding	$6.9M
Total Budget	**$41.7M**

Source: Easterseals Delaware (2018), Econsult Solutions (2019)

2.3. The Spillover Effect of Dollars Spent on Disability Services

The additional funding generated by leveraging State dollars also creates a multiplier effect in the overall state economy. The additional dollars injected into local economies directly support existing employees' salaries and enable agencies to hire additional staff. These new employees will generate more economic activity by spending their paychecks, thus supporting jobs and spending in other industries.

Table 2.2 - 2017 Economic Impact of Easterseals Operations

	Easterseals Operations ($M)
State Funding	$14.6M
Federal Match	$20.1M
Other Funding	$6.9M
Direct Output	$41.7M
Indirect and Induced Output	$21.7M
Total Output	**$63.4M**
Total Employment	**374**
Total Earnings	**$16.9M**
Total Tax Revenue	**$1.1M**

Source: Easterseals (2017), Econsult Solutions (2019)

Table 2.3 - 2017 Tax Revenue Impact from Easterseals Operations

Tax Type	State of Delaware ($M)
Personal Income Taxes	$0.4M
Business Taxes	$0.7M
Total	**$1.1M**

Source: Easterseals (2018), Econsult Solutions (2019)

The total economic impact resulting from agency expenditures can be modeled by constructing an input-output model. This modeling was done using IMPLAN, an industry standard input-output modeling

software program. Such models are designed to estimate two sets of spillover impacts from expenditures:

- The indirect effect, which measures the multiplier effect from the purchase of goods and services from local vendors.
- The induced effect, which measures the multiplier effect from employees' spending of their wages within a particular geography.

Easterseals' 2017 operating budget was modeled to show economic impacts on the state's economy, as shown in Table 2.2. In 2017, Easterseals' operations produced $63.4 million in total output, supporting 374 direct, indirect and induced jobs and $16.9 million in earnings.

As shown in Table 2.3, this impact generated $1.1 million in tax revenue for the state, including $400,000 in personal income tax revenue and $700,000 in business tax revenue.

2.4. The Multiplier Effect Summarized and Placed in Context

As discussed in Section 2.2, the state's ability to leverage spending for matching Federal funds creates larger economic impacts across the state by producing additional economic activity and supporting employment in various industries. Conversely, a loss of State funding results in negative economic impacts statewide.

The scope of these impacts depends on the kind of work performed by A.N.D. member agencies, since different industries have different magnitudes of economic impact. Because of this, the spread of industry classifications among the 39 A.N.D. members includes those that produce slightly higher economic impacts than the industry affiliated with Easterseals on a dollar for dollar basis.

Table 2.4 - Impact of State Funding on A.N.D Members

Increase or Decrease in State Funding to A.N.D. Members	→	Other Funding Dollars Leveraged or Lost	→	Multiplier Effect of Dollars Spent or Lost	→	Economic Activity Supported in Total
+/- $10 million		$13.8 million in federal match + $5.7 million in other funding = $19.5 million leveraged or lost		$29.5 million in direct expenditures + $22.6 million in indirect/ induced impact = $52.1 million annual economic impact		• 460 jobs • $20.0 million in earnings • $1.4 million in State tax revenues

Source: A.N.D (2018), Econsult Solutions (2019)

The impacts of State funding for A.N.D. members on economic activity within Delaware is illustrated in Table 2.4. For every $10 million of State funding allocated to A.N.D. member agencies, an additional $19.5 million is leveraged, of which $13.8 million is Federal funding and $5.7 million is funding from other sources. This funding generates $52.1 million in statewide economic impact, supporting 460 jobs and $20 million in earnings, and creating $1.4 million in state tax revenue.

Because of the leverage effect of Federal funds and other dollars and the multiplier effect of dollars circulating through the State economy, every $1 invested by the State in intellectual and disability services produces $5.20 in economic activity in the state.

This example showcases the significant value provided by State funding for I/DD services across the Delaware economy. It also provides insight into the effects of a lack of State funding, which negatively impacts not only I/DD service providers but the economic welfare of the entire state. These impacts demonstrate the integral role that State funding plays in the ability of Delaware's disability service providers to support their employees and generate statewide economic benefits.

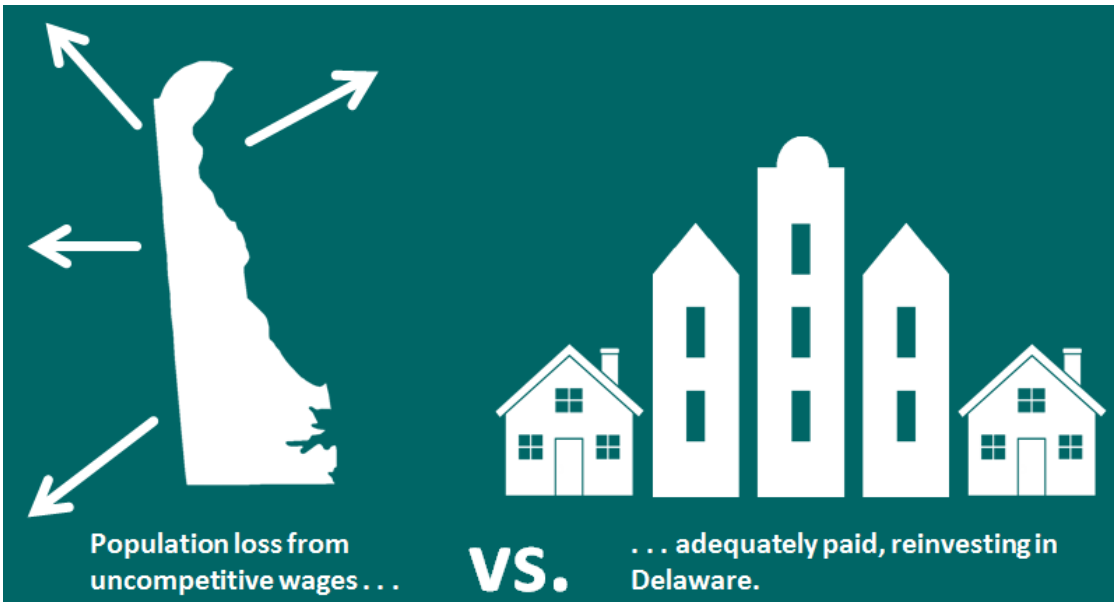
3. Economic Gains from Retention of a Skilled Workforce in Disability Service Provision

3.1. Overview of this Section

As the previous section showed, the economic impact of A.N.D. and its members is great within Delaware. However, stagnant funding has led to uncompetitive wages for direct support professionals, resulting in high turnover, which is costly to member agencies and in some cases is causing workers to find higher-paying work in neighboring states or other industries. According to the previously mentioned 2019 market study on pay rates for I/DD service providers in Delaware, current wages for direct support professionals are far below recommended levels. In order to meet the benchmarked wages recommended in the report, wages for service providers in Delaware need to be increased by an average of $18.67 an hour across all occupations[5].

The effect of these low and stagnant wages are not isolated to direct support professionals and have negative spillover effects which can lead to long term social and economic ramifications if not corrected. Conversely, fully funding services to the disability community will retain the state's trained workforce, keep households from leaving Delaware, and inject more economic activity into local communities (See Figure 3.1).

Figure 3.1 - Retaining A Skilled Direct Support Professional Workforce
Source: Econsult Solutions (2019)



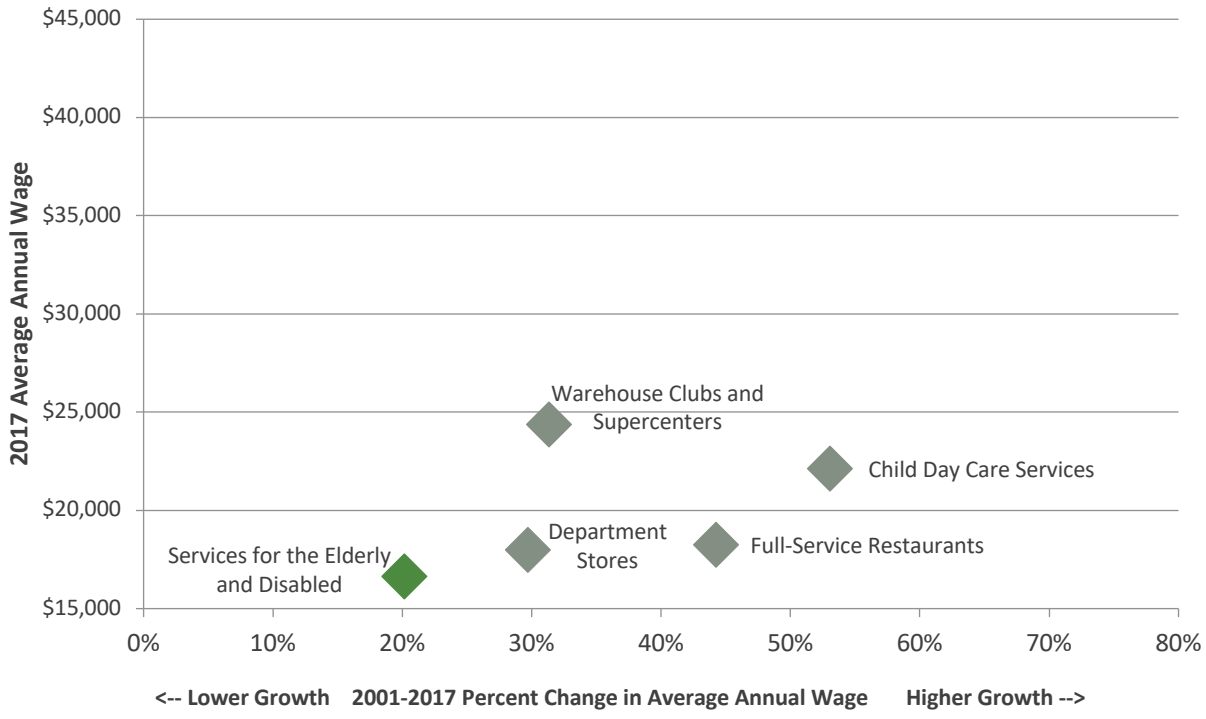
[5] The Division of Developmental Disabilities Services, "2019 Direct Support Professional Rate Rebase Study" (2019).

3.2. Lower Wages Relative to Competing Industries

Although the work of direct support professionals requires technical and professional skills, ethics, emotional wherewithal, and a high level of responsibility, current wages are not commensurate with other occupations that share similar educational attainment requirements (typically a high school diploma), yet require considerably less responsibility. Inadequate funding by states results in lower Medicaid matching funds, which in turn results in wages paid by service providers that are more reflective of a low-skilled, low-demand occupation rather than a wage proportional to their true market value[6].

Direct support professionals serving people with I/DD are mostly home health and personal care aides, who account for approximately 70 percent of the "Services for the elderly and disabled" industry[7]. As shown in Figure 3.2, workers in this industry currently earn 8 percent to 47 percent less than they would in other comparable occupations, making $110 to $640 less in monthly earnings.

Figure 3.2 - Average Annual Wages (2017) and Wage Growth (2001-2017) for Competing Industries within Delaware *Source: BLS (2018)*



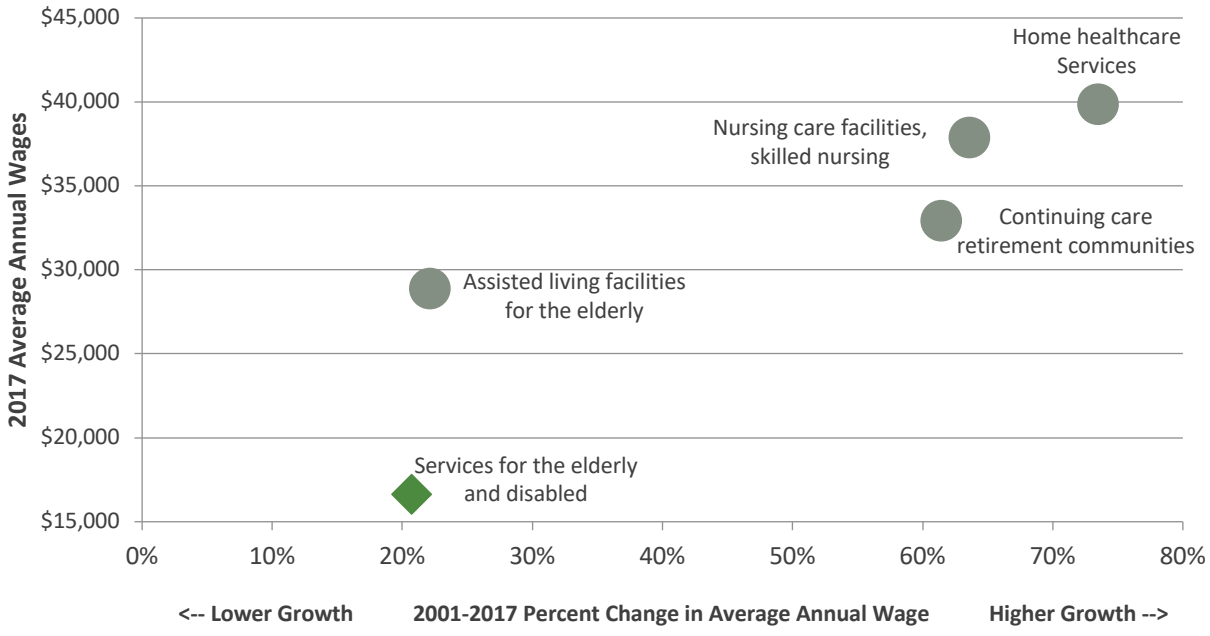
[6] American Network of Community Options and Resources, "Addressing the Disability Services Workforce Crisis of the 21st Century" (2017). https://cqrcengage.com/ancor/file/ZuL1zlyZ3mE/Workforce%20White%20Paper%20-%20Final%20-%20hyperlinked%20version.pdf
[7] Bureau of Labor Statistics (2018)

In order to attract and retain a skilled workforce, wages must be adjusted to entice workers to choose a career as a direct support professional rather than an occupation that may require less responsibility, but offers similar income. It is easy to see that even the most dedicated caregiver would have to compare the costs of working as a direct support professional—low and stagnant wages, long and non-typical hours, high levels of responsibility—with the benefits of working in a different service sector with higher wages, normal hours, less responsibility, and higher earning potential.

3.3. Lower Wages Relative to Similar Jobs

While wages for workers providing services for the "elderly and disabled," as classified by the U.S. Department of Labor, are substantially lower than those in different industries requiring similar educational attainment, they are also uncompetitive when compared to wages earned by care providers in similar industries. These similar industries include "assisted living facilities for the elderly," "nursing care facilities and skilled nursing," "continuing care retirement communities," and "home healthcare services."

Figure 3.3 - Average Annual Wages (2017) and Wage Growth (2001-2017) for Similar Industries within Delaware



Source: BLS (2018)

In 2017, wages for care providers in the services for the "elderly and disabled" industry were lower than wages in all similar industries in Delaware. Wages were 74 percent higher in assisted living facilities for

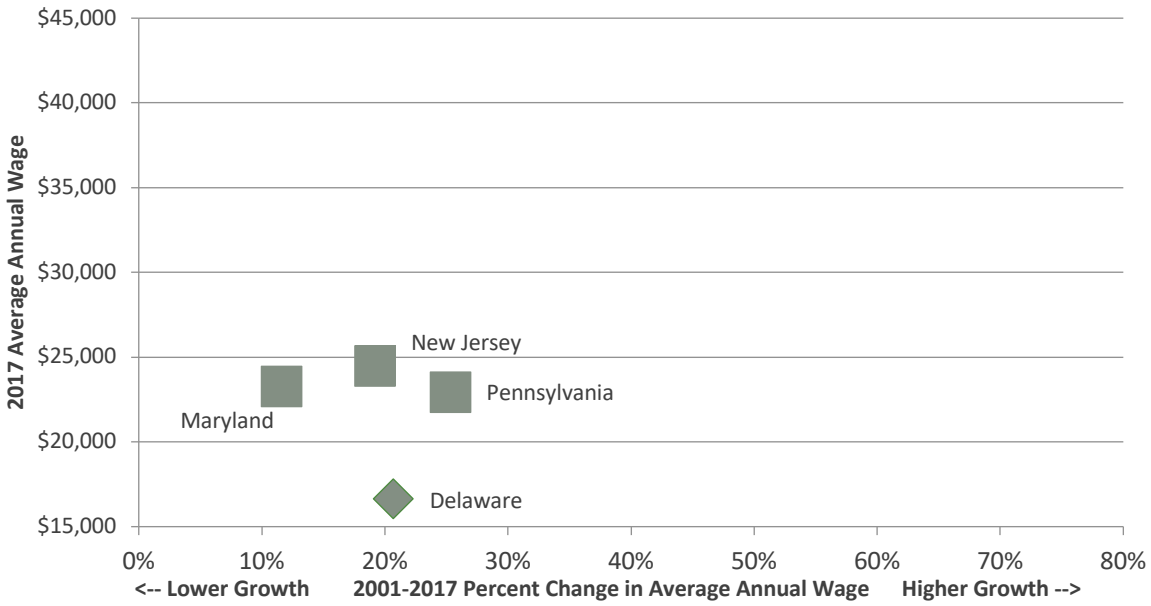
the elderly, 98 percent higher in continuing care retirement communities, 128 percent higher in skilled nursing facilities, and 140 percent higher in home healthcare services (See Figure 3.3). In terms of monthly earnings, workers in the services for the elderly and disabled industry take home $1,000 to $2,000 less than workers in similar industries.

Combined, the metrics show that the wages for direct support professionals in the services for the "elderly and disabled" sector are not only currently paid the lowest of comparable industries, but also had the lowest rate of growth in the past 15 years. It is reasonable to assume that a skilled individual, interested in a career as a caregiver for others, would choose employment in an industry that offers both a high wage and expected wage growth. The service for the "elderly and disabled" industry offers potential employees neither.

3.4. Lower Wages Relative to Other States

The lack of funding for direct support professionals is a nationwide issue. However, the low wage rate poses an additional concern for Delaware, with individuals not only leaving the industry for different employment opportunities within the state, but leaving Delaware—and the state's economy—altogether for direct service positions in neighboring states where wages are higher.

Figure 3.4 - Average Annual Wages (2017) and Wage Growth (2001-2017) for the Services for the Elderly and Disabled Industry in Delaware and Neighboring States



Source: BLS (2018)

While these neighboring states have also experienced low wage growth due to Federal financing

regulations, the average annual wage for this industry is 38 percent higher in Pennsylvania, 40 percent higher in Maryland, and 47 percent higher in New Jersey when compared to Delaware (See Figure 3.4). Workers in Delaware make $525 to $650 less in monthly earnings than workers in neighboring states performing the same job. For this reason, Delaware risks losing its workforce not only to similar occupations and industries within the State**,** but to the same occupation in higher-paying neighboring states.

While Delaware's wages in this industry have grown since 2001, it still offers the lowest annual wages compared to its three neighboring states. If wages are not adjusted to attract and retain a skilled workforce within Delaware, competent individuals will leave the industry, and the quality of care for service recipients will decline. A lack of skilled caregivers could even become damaging for these individuals.

3.5. Uncompetitive Wages Yield Costly Turnover

Individuals make employment decisions based on a variety of factors, including position difficulty, wage rate, and growth potential. Wage stagnation for direct support professionals in Delaware leads to turnover, resulting in an unskilled and undertrained labor pool, increased risks to individuals with disabilities, increased costs to recruit and hire caregivers, lowered advocacy awareness, and family members who are required to leave their jobs to care for individuals with disabilities.

A 2017 national study by the American Network of Community Options and Resources (ANCOR) found that the average turnover rate for direct support providers in 2016 was 45 percent[8]. According to the survey, 88.5 percent of direct support professionals who left their position cited inadequate pay as the primary reason for leaving. Stress of work performed (66.9 percent), lack of advancement opportunities (49.7 percent), and lack of support or appreciation (42.0 percent) also contributed to job separation. Additionally, the survey found that 83 percent of direct support professionals' agencies indicated that employee retention was an issue for their organization[9]. The report estimated that "each vacancy costs agencies between $4,200 and $5,200 in direct and indirect costs[10].

This sentiment was reflected in the survey responses of A.N.D. agencies. In fact, every member surveyed reported that turnover was a problem for their agency; 22 percent stated that employee turnover of direct support professionals was a big problem within their organization and the remaining 78 percent stated that it was somewhat of a problem.

When asked about the typical reasons for separation, A.N.D. members reported that nearly 50 percent of

[8] American Network of Community Options and Resources, "Addressing the Disability Services Workforce Crisis of the 21st Century" (2017). https://cqrcengage.com/ancor/file/ZuL1zlyZ3mE/Workforce%20White%20Paper%20-%20Final%20-%20hyperlinked%20version.pdf
[9] Medisked Connect, "The Staffing Struggle Is Real" (2016). http://mykapp.org/wp-content/uploads/2016/10/Medisked-Staffing-Survey.pdf
[10] Medisked Connect, "The Staffing Struggle Is Real" (2016). http://mykapp.org/wp-content/uploads/2016/10/Medisked-Staffing-Survey.pdf

the employees left their position based on lack of advancement opportunity or low wages. Additionally, 17 percent of individuals listed the position's difficulty as a reason for separation.

100 percent of A.N.D. member agencies surveyed consider employee turnover to be a problem.

When asked which positions these employees were separating for, 54 percent of A.N.D. members believed that these employees were leaving for similar positions within the state and eight percent for similar positions outside of Delaware. Over 38 percent of these individuals were leaving their jobs at A.N.D. member agencies to work in a different industry altogether.

Turnover is a costly problem that can have wide reaching impacts on the affected industry and the economy as a whole. Employee turnover imposes significant costs in terms of training new employees, diminishing productivity, and hampering quality service provision. High turnover may also create additional stress among staff or service recipients of an agency, which could negatively affect employee morale and the wellbeing of people served.

3.6. Additional Costs from Uncompetitive Wages

The costs of an underfunded disability services sector can have significant economic impacts, not only on direct support professionals, but on the people in need of those services. Delaware has been struggling to keep wages for its disability service providers competitive with other industries as well as with what is being offered for the same occupations in its neighboring states.

This lack of funding leads to high rates of employee turnover, costing agencies time and money in onboarding new employees and adjusting to disruptions to service care provision. Hence, lack of funding leads to an inefficient use of resources, in that less is deployed to serving individuals and more is deployed to responding to employee turnover.

More importantly, because of this turnover, agencies struggle to meet the needs of their patients, who ultimately suffer from a lack of proper funding and quality care provision. This failure to provide patients with the level of care needed can have long-lasting social, emotional, and financial impacts on disability care providers and those that depend on their services. This is the subject of the next section.

Jobs in this sector pay less and have seen lower wage growth than the same job in neighboring states, other jobs in the same industry, and even entry-level jobs.

4. Disability Service Provision: Pay Now or Pay Much More Later

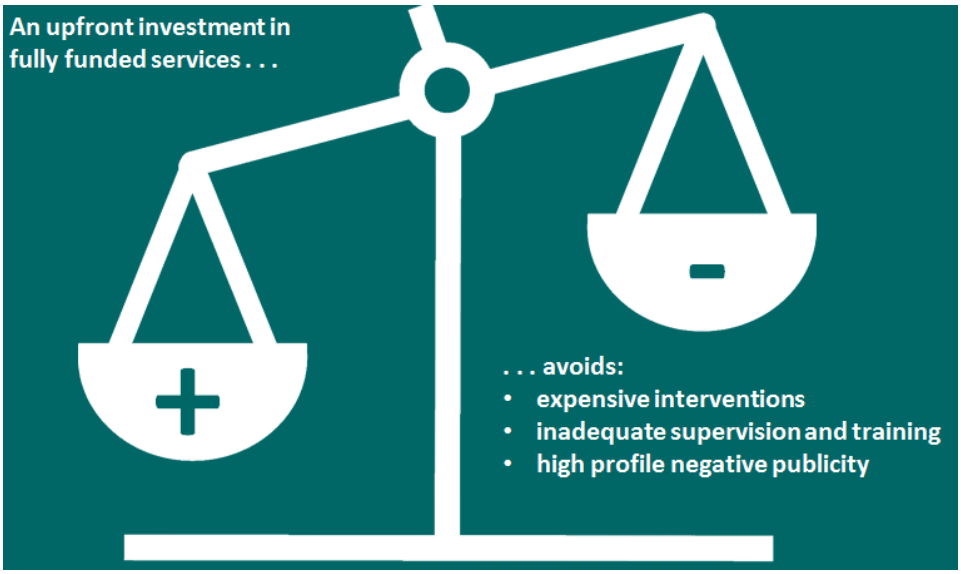
4.1. Overview of this Section

The members of A.N.D provide services for individuals with a range of disabilities. These populations depend upon reliable, high quality service provision to meet their diverse needs and to help them live with purpose and dignity. As discussed in the previous section, this level of service provision will not be possible without proper State funding for agencies that provide services to individuals with disabilities in Delaware.

By not providing sufficient funding, Delaware sends the message that these services, as well as the individuals with disabilities that require them, are undervalued by state policymakers.

With the number of individuals with disabilities in Delaware on the rise, it is imperative that the services needed for these populations be established now to prevent more expensive intervention in the future. State legislators must consider the costs of establishing a well-funded disability services system in Delaware now or face the expensive and damaging consequences of an underfunded system later. As illustrated in Figure 4.1, properly funding services avoids more expensive services needed individuals relying on these services, as well as inadequate supervision and training that has led to high profile negative publicity in the past. These adverse outcomes of inadequate funding could have significant impacts on the public's perception of Delaware's ability to properly provide for its most vulnerable population, which requires serious consideration.

Figure 4.1 – Reducing Social Services Costs and Risks



Source: Econsult Solutions (2019)

4.2. A System on the Brink

The number of individuals with disabilities in Delaware makes up 12 percent of the state's population and is projected to increase its share over the next 20 years. By 2040, there will be nearly 133,000 individuals with disabilities living in Delaware. This increase will undoubtedly put more stress on the already strained disability services sector, where inadequate funding has made quality service provision difficult, leaving the needs of individuals with disabilities unmet.

As shown in Table 4.1, there are approximately 112,000 individuals with disabilities in Delaware. The 18 to 64 age group makes up most of this population, constituting over 50 percent of all individuals with disabilities in Delaware. Seniors make up another 43 percent of all individuals with disabilities, though they have a smaller total population. In fact, 44 percent of all seniors ages 75 and older in Delaware are living with disabilities, compared to only ten percent of the total 18 to 64 population. Table 4.2 shows how the number of individuals with disabilities is projected to grow over the next 20 years, largely due to the projected increase of the overall 65 and older population and their higher occurrences of disabilities.

Table 4.1 – Population With and Without a Disability in Delaware by Age, 2017

	With a Disability	Without a Disability	Total	Age Distribution of those with Disabilities	% of Population with a Disability
Under 5 years	488	54,794	55,282	0.4%	0.9%
5 to 17 years	7,990	140,398	148,388	7.1%	5.4%
18 to 34 years	12,918	194,554	207,472	11.6%	6.2%
35 to 64 years	42,318	319,162	361,480	37.9%	11.7%
65 to 74 years	20,855	73,869	94,724	18.7%	22.0%
75 years and over	27,214	34,579	61,793	24.3%	44.0%
Total	**111,783**	**817,356**	**929,139**	**100.0%**	**12.0%**

Source: Census Bureau, American Community Survey (2017)

Table 4.2– Projected Population with Disabilities in Delaware

Year	2017 and Projected Population	2017 and Projected Population with a Disability	% with a Disability
2017	929,139	111,783	12.0%
2020	1,019,558	125,345	12.3%
2030	1,045,587	128,545	12.3%
2040	1,078,927	132,696	12.3%

Source: ACS (2017), Delaware Population Consortium (2010)

The needs of Delaware's increasing number of individuals with disabilities will have to be answered by a

more robust supply of direct support professionals. While the Bureau of Labor Statistics estimates the United States will need an additional 425,600 home health aides by 2026, as it is the third-fastest growing occupation (46.7 percent) in the country, agencies are currently unable to find enough skilled workers to fill the existing need. Unrealistically low government funding combined with expensive regulatory requirements for agencies create an environment that makes attracting and retaining a strong workforce very difficult[11]. The ability of agencies to recruit and retain a dedicated workforce will only become more urgent in the future as the number of individuals with disabilities in Delaware continues to grow.

4.2.1. Answering the Needs of Individuals with (I/DD)

Nationally, a significant portion of the population with a disability is individuals living with I/DD. In the United States, between 7 to 8 million individuals have been diagnosed with I/DD, making up 18 percent of the country's population of individuals with disabilities and three percent of the total US population.

The I/DD population has significant needs that are not sufficiently met by current care provision mechanisms. As of 2015, there were approximately 600,000 to 700,000 adults with I/DD in the United States being cared for by aging caregivers with no contingency plan in place for the future[12]. This lack of planning, coupled with the aging of the population—there will be an estimated 38 percent increase of individuals over 65 in Delaware by 2025[13]—could create a situation in which there is a lapse in support for individuals with disabilities.

The I/DD population includes those diagnosed with Autism Spectrum Disorder (ASD), which has increased in occurrence over the last two decades. In 2016, the Centers for Disease Control and Prevention reported that approximately 1 in 68 children in the United States were identified as having an ASD, up from 1 in 2,500 in the 1990s, and 1 in 10,000 in the 1980s[14]. Since 2000, the estimated number of children per 1,000 with an ASD has increased from 6.7 to 14.7 in 2012.

In Delaware, the number of children with an ASD increased by 19 percent between 2000 and 2015, a total increase of approximately 3,000 children (See Table 4.3). These statistics reflect increased growth in demand for I/DD services in the State; they also project future demand for long-term care of affected individuals as their families grow older and lose the ability to provide sufficient care.

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[11] Polaneczky, R, "Falling off the cliff, Part 2," *Philly.com* [Philadelphia] (2 December 2017). http://www.philly.com/philly/columnists/ronnie_polaneczky/intellectual-developmental-disabilities-medicaid-waiver-falling-off-the-cliff-part-2.html

[12] Greenfield, B., "When It Comes to Her Daughter's Future, One Aging Mom Is Learning to Let Go," *Yahoo* [US] (2 February 2015). https://www.yahoo.com/news/when-it-comes-to-her-daughters-future-one-aging-111399203012.html

[13] Delaware Division of Services for Aging and Adults with Physical Disabilities, "Population Projections for Persons Aged 60 and Older State of Delaware" (2017). http://dhss.delaware.gov/dsaapd/files/projections_delaware.pdf

[14] Autism Science Foundation, "How Common is Autism?"(2018). http://autismsciencefoundation.org/what-is-autism/how-common-is-autism/

Table 4.3 – Children with Autism in Delaware for 1990-2000 and 2014-2015

	1999-2000	2014-2015	Percent Increase	Percent with Autism, 2015
Ages 3-5	1,652	2,050	24%	4%
Ages 6-11	7,622	8,530	12%	15%
Ages 12-17	6,847	8,255	21%	9%
Ages 18-21	639	1,054	65%	2%
Total	**16,760**	**19,889**	**30%**	**8%**

Source: State of Delaware, Office of Special Education Programs (2015)

Federal law guarantees an education for adolescents with an ASD until the age of 21. After aging out of federally-mandated educational services, these individuals are no longer supported by the specialized assistance they were afforded during childhood. A 2012 report by the U.S. Government Accountability Office noted the various issues involved with children transitioning into adulthood, including insufficient information of the services available, long waiting lists for services, and ambiguity over which government entities are responsible for providing care[15].

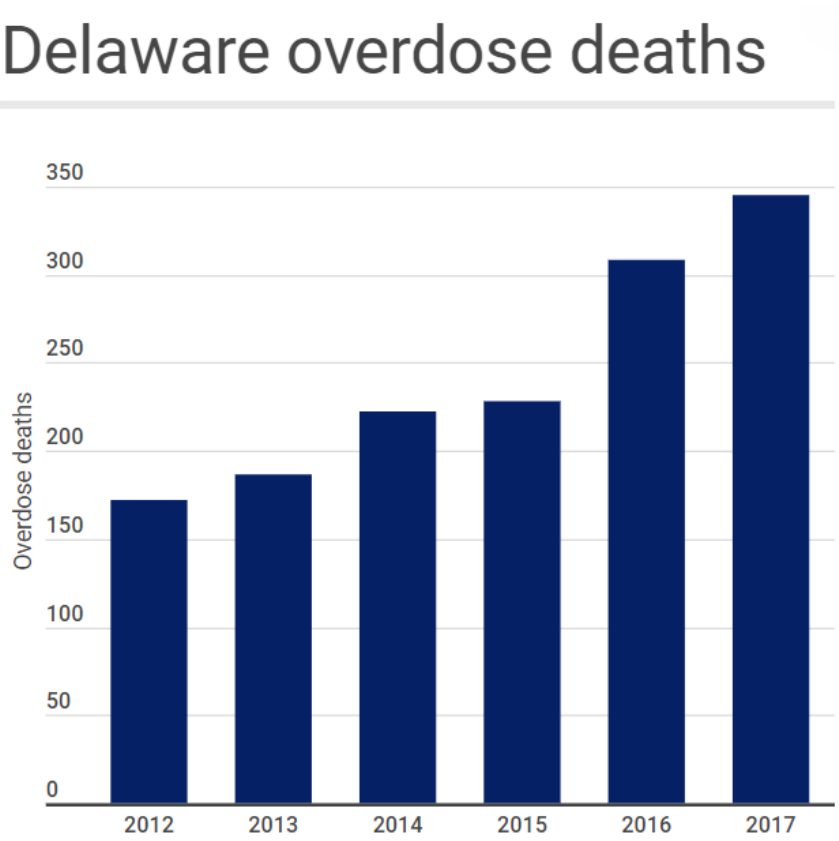
4.2.2. Answering the Needs of Individuals with Substance Use Disorders

In addition to providing services for individuals with disabilities, a number of A.N.D. members also provide services for individuals battling substance use disorders. The increase of substance use disorders is a national crisis and its effect in Delaware resulted in the deaths of 345 individuals in 2017, nearly triple the amount of deaths resulting from automobile accidents that same year[16]. From 2012 to 2017, the number of deaths in Delaware resulting from overdoses has doubled: from 172 in 2012 to 345 in 2017 (See Figure 4.2)[17].

Much of the responsibility of fighting this epidemic is being borne by A.N.D. agencies and the burden is only becoming heavier as substance use disorders and overdose rates increase. Without significant intervention, these unfortunate trends will likely grow worse over time.

[15] Snow, K., 'You Don't Outgrow Autism': "What Happens When Help Ends at 21?" *NBC news* [US] (12 April 2015). https://www.nbcnews.com/news/us-news/you-dont-outgrow-autism-what-happens-when-help-ends-21-n340066
[16] Coons, C., "Opioid abuse prevention must remain a priority," *Delaware Online* [Delaware] (2 June 2017). https://www.delawareonline.com/story/opinion/contributors/2017/06/02/opioid-abuse-prevention-must-remain-priority/365283001/
[17] Silverman, P.R.,. Mack, J., Anderson, F.S., Rattay, K.T., "The Delaware Opioid Epidemic," *Delaware Journal of Public Health* (2017). http://www.dhss.delaware.gov/dhss/dph/hsp/files/viscondeoe.pdf

Figure 4.2 – Annual Age-Adjusted Drug Overdose Mortality Rates, Delaware, 2012-2017



Source: Delaware Division of Public Health, WHYY News (2018)

In addition to the increasing number of people requiring treatment services, the costs of this epidemic are creating additional challenges for agencies serving affected individuals. In Delaware, healthcare costs associated with opioid addiction alone totaled approximately $109 million in 2011, equating to a per-capita cost of $117 in Delaware, the third-highest in the United States[18]. Specifically, it costs $508 to respond to each call for service in New Castle County, DE which averaged nine overdoses per day in 2016. Delaware emergency respondents administer the drug Naloxone to prevent death during an overdose. This drug costs $49 per dose and was administered 2,334 times in 2016. Furthermore, in order to help battle the epidemic, which resulted in 308 deaths in 2016, an additional $2 million was allocated to the Delaware Department of Health and Social Services to cover the costs of substance use disorder treatment[19].

[18] Matrix Global Advisors LLC, "Health Care Costs from Opioid Abuse: A State-by-State Analysis" (2015). https://drugfree.org/wp-content/uploads/2015/04/Matrix_OpioidAbuse_040415.pdf
[19] Horn, B., "What heroin costs Delaware — in lives and money," *Delaware online* [Delaware] (29 November 2017). https://www.delawareonline.com/story/news/local/heroindelaware/2017/11/29/what-heroin-opioids-cost-delaware/842267001/

Years of insufficient funding for Delaware's service providers have strained the system to the point of breaking. Not only are service providers finding it more difficult to meet the needs of people served, but their inability to do so can create harm and add to the problems they seek to mitigate. Additionally, outside of the current funding issues, there will be an increase in demand for health and social services as trends in disabilities of the elderly population, I/DD diagnoses of children, and occurrences of substance use disorder continue to increase. The current and projected strain on the health and social services sector can be avoided if decisive and timely steps are taken to address these funding issues; if not, more significant and costly interventions will be necessary in the future.

4.3. The "Pound of Cure" That Will Have to be Paid if the "Ounce of Prevention" Isn't

As the data in Section 4.2 shows, the demand for well-funded, high quality service provision for individuals with disabilities in Delaware is urgent and will only grow more dire as the number of individuals with disabilities grows. If investment in service provision for individuals with disabilities remains underfunded, future interventions will prove to be costlier, as will the negative effects that an underfunded system has on the State economy.

These negative impacts are already apparent in the financial challenges currently facing family caregivers of individuals with disabilities. Childhood disability has been found to reduce employment significantly among both married and single mothers. According to a 2012 Princeton report[20], about 10 percent to 30 percent of mothers of children with disabilities have had to stop working in order to provide fulltime care for their children; another 15 percent to 68 percent have had to decrease their work hours. Estimates suggest an average decline of 9 percent in labor force participation for mothers with a child with disabilities, relative to all mothers, resulting in an annual loss of earnings amounting to $3,150[21]. With the prevalence of childhood autism on the rise, it is vital that services are put in place to address the needs of the younger population.

These services will be particularly necessary for individuals with disabilities as they and their family caregivers grow older. While the aging baby boomer population is a cause for concern for various economic reasons, the number of aging caregiving parents of disabled persons will also grow over the next decade. It is projected that there will be approximately 212,000 persons over the age of sixty-five—a 38 percent increase— by 2025 in Delaware. Without proactive planning, placement can cause stress for the persons with disabilities and placement issues for the state agencies charged with understanding the individual's disability and needs. Too often, state government agencies do not know the person with

[20] Stabile, M., Allin, S., "The Economic Costs of Childhood Disability," *Princeton University* (2012). http://www.jstor.org/stable/41475647?seq=1#page_scan_tab_contents
[21] Stabile, M. et al.

disabilities exists until after the emergency occurs[22].

These reactive interventions often involve other State funded systems that are, similar to disability services, already overwhelmed. Without access to early care, many individuals with substance use disorders and untreated mental illness get caught in cycles of hospitalization, homelessness, and incarceration. Nationally, it is estimated that 25 percent of individuals experiencing homelessness have some form of mental illness, while 45 percent of the prison population suffers from substance use disorders[23,24] . These reactive interventions cost the State upwards of $200 million annually[25, 26].

Compared to proactive treatments and other support services, homeless shelters, emergency rooms, and prisons are far more costly ways to serve individuals with substance use disorders; they are the "ounce of prevention" that is a far better investment than the "pound of cure."

4.4. The Bigger Risk Exposure: A Loss of Confidence in the System

Individuals living wih disabilities face the chaos of constant turnover of their direct support professionals, due primarily to low wages (88.5 percent of direct support professionals cite this as a reason for separation)[27]. These low wages can attract workers that are often not equipped with the skills necessary to adequately care for an individual with disabilities. While there are many stories about dedicated direct support professionals, far too often these stories are overshadowed by high-profile reports on gross incompetence, neglect, and exploitation. These negative stories create an outsized perceptional impact on the system because they erode public confidence in the state's ability to take care of its most vulnerable citizens.

Failure to properly invest in preventive care results in an outsized negative effect on the state's reputation, because they erode public confidence in the State's ability to take care of its most vulnerable citizens.

This negative perception of the system compounds the stress already experienced by underpaid employees of disability service providers. Kathy Brown McHale, CEO of Special People in the Northeast Inc. (SPIN) in Philadelphia, explains that although direct support professionals in Pennsylvania earn only

[22]Polaneczky, R. "Falling off the cliff." *Philly.com* [Philadelphia] (2 December 2017). http://www.philly.com/philly/columnists/ronnie_polaneczky/intellectual-developmental-disabilities-family-living-falling-off-the-cliff-part-4.html
[23] U.S. Department of Health & Human Services (2019).
[24] Treatment Advocacy Center, "Serious Mental Illness and Homelessness" (2016).
[25] Heslin, K.C., Elixhauser, A., Steiner, C.A., "Hospitalizations Involving Mental and Substance Abuse Disorders Among Adults, 2012," *Agency for Healthcare Research and Quality* (2015).
[26] Vera Institute of Justice. "Prison spending in 2015" (2015). https://www.vera.org/publications/price-of-prisons-2015-state-spending-trends/price-of-prisons-2015-state-spending-trends/price-of-prisons-2015-state-spending-trends-prison-spending
[27]American Network of Community Options and Resources (2017). https://cqrcengage.com/ancor/file/ZuL1zlyZ3mE/Workforce%20White%20Paper%20-%20Final%20-%20hyperlinked%20version.pdf

roughly $11.17 per hour, "they're expected to possess professional skills and knowledge and demonstrate the highest of values and ethics. Even the most committed workforce members are leaving positions and the people they serve because they need a family-sustaining wage"[28].

One devastating story detailed the death of Christina Sankey, a Philadelphia woman with I/DD, who froze to death when her direct support professionals lost track of her while shopping[29]. Bryan Nevins, a young Bucks County resident with severe autism, died inside a scorching van in the summer of 2010 while his caregiver was texting her boyfriend[30]. Both caregivers were sentenced to jail for their neglect. These situations are entirely preventable. The preventative cost—establishing a skilled, well-compensated, and capable workforce—is miniscule compared to the cost of not doing so.

The importance of funding and accountability for disability services agencies is illustrated by troubling accounts of abuse and neglect within a service provider that formerly operated in Delaware. This agency, which operated as AdvoServ at the time of the incidents, but has since rebranded as Bellweather Behavioral Health, was the center of public scrutiny after a fifteen year-old girl died after being pinned down by staff members. This case was only one of several claims of abuse and neglect made against the agency over the last few years. After this tragic incident, the State of Maryland withdrew all individuals it was funding from AdvoServ's homes in Delaware. AdvoServ was never a member of A.N.D. and has made changes to its branding and organizational leadership since these incidents, but this scandal serves as an example of how the failures of one agency can bring criticism to the competency of the state's system[31].

Public scrutiny of these high-profile cases often implicates on the state's responsibility in failing to properly care for individuals with disabilities. While this is the nature of media coverage, there is undoubtedly a message sent by budgetary policies regarding funding for disability services: these policies ultimately reflect how highly the state values the needs of individuals with disabilities. These tragic failures of the system create a reputation for the state that adversely colors the perception of the state among prospective residents, employees, employers, and investors.

[28] Polaneczky, R., "Falling off the cliff, Part 2," *Philly.com* [Philadelphia] (2 December 2017). http://www.philly.com/philly/columnists/ronnie_polaneczky/intellectual-developmental-disabilities-medicaid-waiver-falling-off-the-cliff-part-2.html
[29]Polaneczky, R., "The death no one cares about," *Philly.com* [Philadelphia] *(*10 April 2014). http://www.philly.com/philly/columnists/ronnie_polaneczky/20140410_The_death_no_one_cares_about.html
[30]Polaneczky, R., "The death no one cares about," *Philly.com* [Philadelphia] (10 April 2014). http://www.philly.com/philly/columnists/ronnie_polaneczky/20140410_The_death_no_one_cares_about.html
[31] Vogell, H., "Bellwether Behavioral Health Is Controversial Group Home Operator AdvoServ — With a New Name," *PropPublica* [US] (28 March 2017). https://www.propublica.org/article/bellwether-behavioral-health-is-controversial-group-home-operator-advoserv

5. Gainfully Employed, Contributing to Household Income and Statewide Economic Activity

5.1. Overview of this Section

As discussed in Section 4, the financial and social challenges facing individuals with disabilities and their families are significant, long-term, and in need of systematic intervention. A.N.D. agencies seek to resolve some of these challenges through job training programs offered to people served. These programs help train and place individuals with disabilities in employment, which helps them achieve financial and social independence while simultaneously strengthening the overall workforce in Delaware. The impacts of these programs are explored throughout this section.

5.2. The Importance of Work and Overcoming Barriers to Work

An important role played by A.N.D. and its members is providing training, support, and placement services so that individuals with disabilities can be gainfully employed. In addition to producing psychological, social, and financial benefits for participants, their additional earnings translate into more disposable income and thus support a wide range of businesses and industries throughout the state.

In Delaware, there is great need for the kinds of job training and placement programs offered by A.N.D.'s member agencies. In 2016, 4,400 of the 20,300 of individuals aged 18 to 64 living with disabilities in Delaware were unemployed. This 18 percent unemployment rate for those with disabilities was more than three times the 5 percent unemployment rate of the population that does not have a disability. The unemployment rate for individuals with disabilities has declined since 2010 when it reached 19 percent; however, this is partly due to a decline in the overall number of individuals with disabilities, as there were declines in both employed and unemployed individuals with disabilities. Labor participation rates have remained stable, with less than half of individuals with disabilities employed or looking for work.

Table 5.1—Employment Status of Persons with a Disability in Delaware, 2010 to 2016

	2010	2016	% Change
Employed	21,102	20,284	-4%
Unemployed	5,032	4,439	-12%
Unemployment Rate	19%	18%	
Not in Labor Force	33,994	31,823	-6%
Labor Force Participation Rate	44%	44%	
Total 18 to 64 Persons with a Disability	**60,128**	**56,546**	**-6%**

Source: ACS (2016)

Without the support of disability service providers, individuals living with a disability face challenges in obtaining employment. According to the Bureau of Labor Statistics, over half of non-working persons with a disability reported some barrier to employment. Of these barriers to employment, 16.5 percent of working-aged persons cited lack of education or training, while 7 percent considered lack of job counseling to be a barrier to employment (See Table 5.2).

Table 5.2– Persons with a Disability Who Were Not Employed by Type of Barrier to Employment, United States, May 2012 (in millions)

		Percent of total by type of barrier							
	Total not employed with a barrier to employment	Lack of education or training	Lack of job counseling	Lack of transport	Loss of gov. assistance	Need for special features	Employer or coworker attitudes	Own disability	Other
Total, 16 years and over	11.5	14%	6%	12%	4%	10%	8%	81%	18%
16 to 64 years	7.9	17%	7%	14%	5%	12%	10%	84%	15%
65+ years	3.6	9%	3%	6%	3%	6%	4%	74%	24%
Never worked	1.8	9%	3%	6%	3%	6%	4%	74%	24%

Source: BLS (2017)

The type of work that A.N.D members do greatly reduces these barriers to employment—such as lack of job counseling and their own disability—for individuals with disabilities. The value of this work is evident in the story of Jeff Riley (see the next page), who gained important career opportunities through the workforce services provided by A.N.D agencies. His story serves as a testament to the long lasting impacts these services can have on the professional and personal outcomes of people in the program.

5.3. Benefits to Participants

Individuals with disabilities should be considered not just recipients of care, but potentially contributing members to our economy and workforce. A.N.D. members prove to be a vital link between connecting individuals with disabilities with meaningful work. In fact, the placement work that A.N.D. members perform not only helps individuals overcome their barriers to employment, but also creates a return on investment for businesses that employ them. This is not only beneficial to individuals with disabilities, but to Delaware as a whole, as increased income results in increased spending within the State.

To explore how job placement programs generate economic benefits in the state, we focused our analysis on people with disabilities served by DPI Group, previously known as “DePaul Industries,” an A.N.D.

SUCCESS STORY

The Positive Impact of Employment Programs offered by A.N.D Agencies[32]



Jeff Riley always dreamed of living on his own. However, Jeff had a hard time finding the right kind of job that could offer the kind of wages he needed to achieve his independence, as he found it difficult to adjust to the demands of new workplaces. For a while, Jeff had a job doing assembly work at a facility in Newark through an employment program managed by Chimes, an A.N.D. member organization. Although he was making decent wages at that job, Jeff was not making enough to afford his own place to live.

Things changed when Chimes placed Jeff in a work trial with the janitorial crew at the Amoco and the Governor Bacon Health buildings. Jeff excelled at his job and got along well with his colleagues and the state employees that worked in the buildings he cleaned. Chimes made it possible for Jeff to transfer back to his assembly work in Newark if the demands of his new workplace became too overwhelming, but this rarely happened.

After several years of working on the janitorial crew, Jeff saved enough money to achieve his dream. He purchased a mobile home for himself in Middletown, Delaware, where he currently lives on his own. His job on the janitorial crew continues to help Jeff to pay his bills and buy goods and services from his local community. If Jeff's story could be replicated for even a handful of these other individuals also seeking meaningful work in Delaware, the state would undoubtedly see positive returns on investment, both socially and financially.

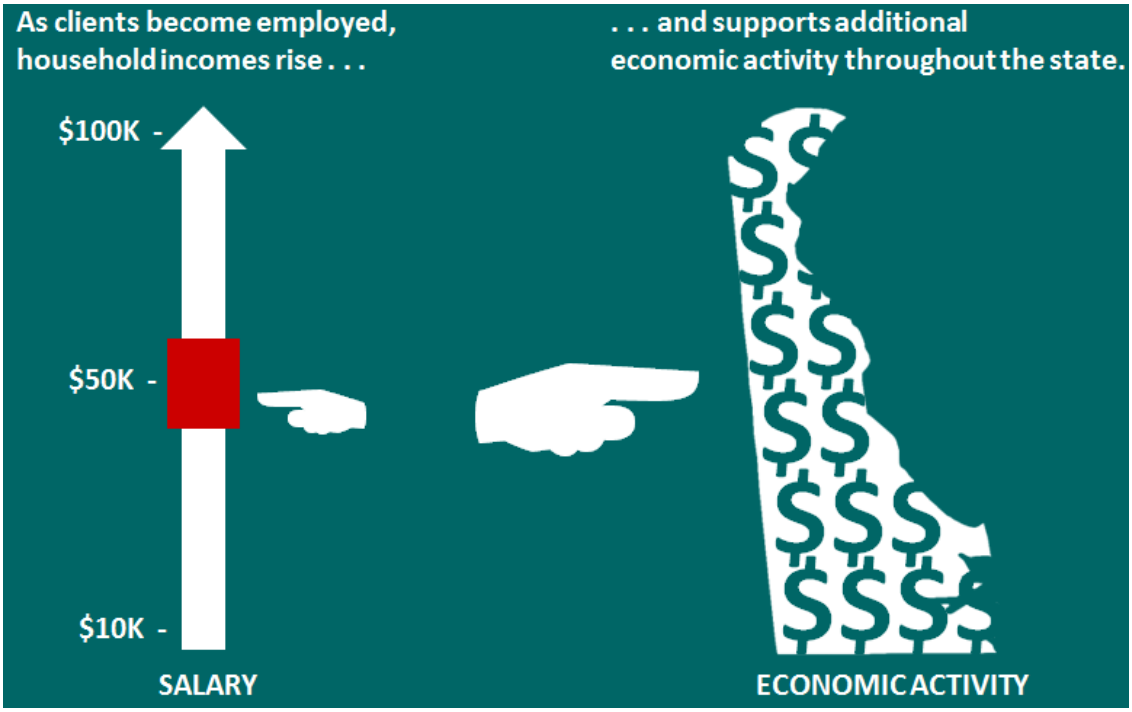
member agency that provides employment services to individuals with disabilities. Their services include employee placement in State set-aside contract positions, the impact of which is examined in the following section.

In 2018, DPOI Group placed 30 individuals in State contracted positions. After placement, these 30 individuals made an average of $13 an hour and worked an average of 30 hours a week.

[32] Ability Network of Delaware, "2017 Annual Report to the Governor" (2018).

These positive outcomes generated by the services provided by DPI Group represent the large economic benefits created by the work of A.N.D. agencies. Investment in these agencies helps to connect individuals with disabilities (or clients, as they are called by some agencies) with fulfilling and supportive employment while generating economic benefits for the state's economy, as illustrated by Figure 5.1.

Figure 5.1 - Gainfully Employed Individuals



Source: Econsult Solutions (2019)

5.4. Benefits to Delaware's Economy

DPI Group's work is representative of the type of impact generated by A.N.D. members throughout the state. By providing training and placement services for individuals with disabilities, they are helping people socially and financially, and allowing them to contribute to the local workforce and economy.

The seven A.N.D. member agencies that provide employment placement programs under the set-aside contracts approved by the Commission for Statewide Contracts to Support Employment for Individuals with Disabilities successfully trained and placed 689 individuals in State contract positions in FY 2019. These individuals earned an aggregate $4.5 million in wages that year, money which they would not have otherwise earned and money which then had a ripple effect throughout the state economy as a portion of it was spent back into the state economy.

Hence, in addition to helping individuals with disabilities find and keep jobs, A.N.D. member agencies' work in employment training and placement also supported additional economic activity and employment throughout the state. Specifically, it is estimated that the wages earned by participants employed under the set-aside contracts that were spent in their local communities generated an additional $5.1 million of economic activity in the State economy, i.e., supporting 35 additional jobs and generating $240,000 in additional tax revenues to the state government (see Table 5.3).

Table 5.3 - Economic and Fiscal Impacts of Employment in A.N.D.'s Set-Aside Contracts

# Participants Employed in FY 2019	689
Aggregate Wages Earned by Participants	$4.5 million
Economic Impact from Portion of Wages Spent in Local Communities[33]	$5.1 million
Additional Employment Supported	35
Additional Labor Income Earned	$1.5 million
Additional State Tax Revenues Generated	$240,000

Source: A.N.D. (2018), IMPLAN (2019)

In Delaware, taxpayers received $1.07 of benefits for every $1.00 spent on a supported employee.

Hiring persons with disabilities is not only beneficial for the individual and their employer, but valuable to taxpayers. A 2010 Kent State University study found that the "average supported employee with intellectual disabilities served by vocational rehabilitation agencies from 2002 to 2007 generated a per capita gross monthly benefit to taxpayers of $769.54. Their corresponding per capita gross monthly cost to taxpayers was $636.45, for a net monthly benefit of $133.10 and a benefit-cost ratio of 1.21. In other words, the average supported employee with intellectual disabilities served by vocational rehabilitation agencies returned $1.21 of benefits to taxpayers for every $1.00 of costs."[34] Due to variations in program efficiency, benefit-cost ratios varied from state to state. In Delaware, taxpayers received $1.07 of benefits for every $1.00 spent on a supported employee who found a job with vocational rehabilitation funding.

With additional funding, Delaware could not only improve the quality of services provided to individuals with disabilities, but expand the career options available for those individuals while generating additional economic growth. Not only do these economic opportunities help improve the lives of individuals served

[33] The four rows in this section of the table refer to the economic multiplier effect in the State's Economy (i.e., the effect of participant wages spent in local communities, which benefits Delaware citizens who are not employed under the set-aside contracts.
[34] Cimera, R. E., "National Cost Efficiency of Supported Employees with Intellectual Disabilities: 2002 to 2007," *Kent State University* (2010). https://www.ncbi.nlm.nih.gov/pubmed/20025355

directly by A.N.D. organization, but they help support growth for all industries and employees in the State.

While this investment has a positive multiplier effect in the economy, a lack of investment has severe drawback and harmful impacts on both individuals with disabilities and the state economy as a whole. Investment in these services is urgent and needed now, not only to avoid the costs associated with an underfunded system, but to stimulate economic activity and growth.

6. Conclusion

A.N.D.'s 39 member agencies provide invaluable services to people with disabilities and other life challenges in Delaware. As such, they touch every household in the state, who is directly or indirectly connected to someone who has mental health issues, physical disabilities, or intellectual disabilities. Member agencies render care that promotes safety, wellness, and dignity, and are therefore an important part of the state's safety net and sense of community wellbeing.

The work of A.N.D.'s member agencies can also be evaluated from an economic standpoint. State investment in the health and social services funds that these member agencies rely upon produces additional economic activity that benefits the entire state. This report has articulated four aspects of this economic impact.

First, State funding leverages other dollars and has a multiplier effect throughout the state economy. Every $10 million invested by the state produces $52.1 million in economic activity throughout the state, supporting an additional 462 jobs in the economy and generating $1.4 million in state tax revenues.

Second, State funding mitigates against the current pay gap workers face relative to the same jobs in neighboring states, to jobs in the same industry, and to other entry-level jobs. This reduces employee turnover, which allows more resources and better care to go to individuals in need.

Third, State funding represents an investment in preventative care, which minimizes the more costly outlays the State would otherwise have to bear in the form of homeless shelters, emergency rooms, and prisons. This "ounce of prevention for a pound of cure" lessens the burden of future public expenditures while presently generating better outcomes for individuals with disabilities and the entire state economy.

Fourth, State funding for employment training and placement not only help individuals obtain gainful employment and earn money, but also create spillover effects throughout the state economy. The employees placed by the A.N.D. set-aside contract alone produced $5.1 million in economic activity throughout the state in FY 2019, supporting 35 jobs outside the program and generating $240,000 in state tax revenues. Job placements from vocational rehabilitation funding and sustained long-term funding for supported employment has an even larger effect.

In short, the case for adequately funding the work performed by A.N.D.'s 39 member agencies is not just one based on compassion and community. Increased State investment in health and social services is a sound investment that produces an outsized benefit for the entire state economy.

Appendix A – Economic Impact Methodology

A.1 OVERVIEW

Economic impact estimates are generated by utilizing input-output models to translate an initial amount of direct economic activity into the total amount of economic activity that it supports, which includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. This section summarizes the methodologies and tools used to construct, use, and interpret the input-output models needed to estimate this project's economic impact.

A.2 INPUT-OUTPUT MODEL THEORY

In an inter-connected economy, every dollar spent generates two spillover impacts:

First, some amount of the proportion of that expenditure that goes to the purchase of goods and services gets circulated back into an economy when those goods and services are purchased from local vendors. This represents what is called the "indirect effect," and reflects the fact that local purchases of goods and services support local vendors, who in turn require additional purchasing with their own set of vendors.

Second, some amount of the proportion of that expenditure that goes to labor income gets circulated back into an economy when those employees spend some of their earnings on various goods and services. This represents what is called the "induced effect," and reflects the fact that some of those goods and services will be purchased from local vendors, further stimulating a local economy.

The role of input-output models is to determine the linkages across industries in order to model out the magnitude and composition of spillover impact to all industries of a dollar spent in any one industry. Thus, the total economic impact is the sum of its own direct economic footprint plus the indirect and induced effects generated by that direct footprint.

A.3 INPUT-OUTPUT MODEL MECHANICS

To model the impacts resulting from the direct expenditures, Econsult Solutions, Inc. developed a customized economic impact model using the IMPLAN input/output modeling system. IMPLAN represents an industry standard approach to assess the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes within a county its surrounding area

IMPLAN has developed a social accounting matrix (SAM) that accounts for the flow of commodities through economics. From this matrix, IMPLAN also determines the regional purchase coefficient (RPC), the proportion of local supply that satisfies local demand. These values not only establish the types of goods and services supported by an industry or institution, but also the level in which they are acquired locally. This assessment determines the multiplier basis for the local and regional models created in the IMPLAN modeling system. IMPLAN takes the multipliers and divides them into 440 industry categories in accordance to the North American Industrial Classification System (NAICS) codes.

The IMPLAN modeling system also allows for customization of its inputs which alters multiplier outputs. Where necessary, certain institutions may have different levels of demand for commodities. When this occurs, an "analysis-by-parts" (ABP) approach is taken. This allows the user to model the impacts of direct economic activity related to an institution or industry with greater accuracy. Where inputs are unknown, IMPLAN is able to estimate other inputs based on the level of employment, earnings, or output by an industry or institution.

A.4 EMPLOYMENT AND WAGES SUPPORTED

IMPLAN generates job estimates based on the term "job-years", or how many jobs will be supported each year. For instance, if a construction project takes two years, and IMPLAN estimates there are 100 employees, or more correctly "job-years" supported, over two years, that represents 50 annual jobs. Additionally, these can be a mix of a full and part-time employment. Consequently, job creation could feature more part-time jobs than fulltime jobs. To account for this, IMPLAN has a multiplier to covert annual jobs to full-time equivalent jobs.

Income to direct, indirect, and induced jobs is calculated as employee compensation. This includes wage and salary, all benefits (e.g., health, retirement) and payroll taxes (both sides of social security, unemployment taxes, etc.). Therefore, IMPLAN's measure of income estimates gross pay opposed to just strictly wages.

A.5 TAX REVENUE IMPACT

The economic impacts in turn produce one-time or ongoing increases in various tax bases, which yield

temporary or permanent increases in various tax revenues. To estimate these increases, Econsult Solutions, Inc. created a tax revenue impact model to translate total economic impacts into their commensurate tax revenue gains. These tax revenue gains only account for a subset of the total tax revenue generation that an institution or industry may have on the economy. Furthermore, where institutions are tax exempt, only the tax revenue generation from supported indirect and induced industries is accounted for.

Appendix B – Bureau of Labor Statistics Industry Reclassification

Each first quarter, the Quarterly Census of Employment and Wages (QCEW) program incorporates updated industry assignments as they improve their classifications of establishments. Usually reclassifications are spread among industries. However, in 2013, substantial changes were made to the Services for the elderly and disabled industry.

Prior to 2013, Unemployment Insurance (UI) records from several State-funded programs that provide nonmedical, home-based services for the elderly and persons with disabilities were incorrectly classified under the North American Industry Classification System (NAICS) code for private households (NAICS 814110), which is out of scope for the Current Employment Statistics (CES) program. As of the first quarter 2013, this employment is now coded in services for the elderly and persons with disabilities (NAICS 624120), which is in scope. The introduction of employment due to a coding change would create large, noneconomic breaks in CES time series data. To prevent these breaks and to properly allocate historic employment, CES worked with QCEW microdata and information from the affected states to reconstruct the histories of the affected series

While the CES program reconstructed the employment and wage histories in NAICS 624120, the QCEW program did not. Because of this change in classification, there are large increases in the QCEW data in NAICS 624120 from 2012 to 2013.[35]

Series Id: ENU10000105624120
State: Delaware
Area: Delaware -- Statewide
Industry: NAICS 624120 Services for the elderly and disabled
Owner: Private
Size: All establishment sizes
Type: All Employees

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Year	Annual
2006	1477
2007	1286
2008	1383
2009	1413
2010	1598
2011	1516
2012	1577
2013	2479
2014	3107
2015	3481
2016	3828

Series Id: ENU10000205624120
State: Delaware
Area: Delaware -- Statewide
Industry: NAICS 624120 Services for the elderly and disabled
Owner: Private
Size: All establishment sizes
Type: Number of Establishments

Download: xlsx

Year	Annual
2006	36
2007	42
2008	46
2009	49
2010	53
2011	52
2012	65
2013	559
2014	1100
2015	1336
2016	1615

Source: Bureau of Labor Statistics (2018)

[35]Abadam, V.N., Harvins, K.L., "Revisions in State Establishment-based Employment Estimates Effective January 2014," *bls.gov* (2014). https://www.bls.gov/sae/benchmark2014.pdf